

WHAT IS CLAIMED IS:

1. A powered toothbrush comprising a handle, a head with cleaning elements thereon movable relative to the handle, a motor with a drive shaft, a first housing fixedly
5 connected to shaft having a cam device thereon, a second housing having a cam device cooperatively engaged with the cam device on the first housing to convert rotational movement of the first housing into reciprocating motion of the second housing along the longitudinal axis of the
10 toothbrush, a volute extension of the second housing cooperatively mating with an opening in a portion of the head to translate reciprocating movement of the second housing into oscillating motion of the cleaning elements.

2. The powered toothbrush of claim 1 wherein the cam devices on the housings are a cam follower and mating helical track for the cam follower.
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3. The powered toothbrush of claim 1 wherein the head of the toothbrush is removable.

4. The powered toothbrush of claim 1 wherein the handle includes an upper conical enclosure surrounding the
20 first and second housings, the conical enclosure having an upper sliding surface.

5. The powered toothbrush of claim 4 wherein the head includes a stem with a lower sliding surface that facilitates movement across the upper sliding surface on the upper
25 conical enclosure of the handle.

6. The powered toothbrush of claim 5 wherein a washer is located between the sliding surfaces of the handle and head.